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OCTOBER 16, 1935

COLLEGE OF EDUCATION
THE OHIO STATE UNIVERSITY

Vol. XIV, No. 7

EDUCATIONAL RESEARCH BULLETIN

(Entered in the United States Patent Office)

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PUBLISHED MONTHLY BY THE BUREAU OF EDUCATIONAL RESEARCH, OHIO STATE UNIVERSITY, FOR THE SCHOOLS OF OHIO. EDITORIAL AND BUSINESS OFFICES, ROOM 203, COLLEGE OF EDUCATION, COLUMBUS, OHIO

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THE EDUCATIONAL RESEARCH BULLETIN is published monthly except during June, July, and August. Entered as Second-Class Matter, February 9, 1922, at the Post-Office at Columbus, Ohio, under the Act of August 24, 1912. Accepted for mailing at specified rates of postage provided for in Section 1103, Act of October 3, 1917, authorized February 21, 1922.

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Educational Research Bulletin

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Collecting Evidences of Children's Preferences

By F. P. FRUTCHEY

A VALID source of the evidence of children's motion-picture preferences may be life situations in which children express preferences for motion pictures. The child who stays to see a motion picture a second or third time probably likes the picture better than one he sees through but once, and much better than one he leaves before it is ended. A child who advises his playmates not to see a particular movie probably did not like it. When a child has an opportunity to go to a movie but says, "If it is like ————, I don't want to go," the judgment is that probably the previous picture did not please him.

How do such expressions of motion-picture preferences compare with the conclusion drawn from the results of the paired-comparison method?[1] Are the movies which the children choose by the method of paired comparisons, the same movies for which they express preference in life situations? Are those which they do not prefer the same by each method?

Although we have no evidence in the area of motion-picture preferences, there is some evidence accumulating in the area of free-time activities. The meager data which we have point to an affirmative answer to these questions. Miss Weedon has been working for some time with a group of fourth-, fifth-, and sixth-grade children, and the results so far gathered indicate that there is a rather high positive relationship between these children's free-time activity choices collected by observational methods and those collected by the method of paired comparisons.[2] The activities which these children choose during their

[1] Frutchey, F. P. "Measuring Motion-Picture Preferences," *Educational Research Bulletin*, XIV (March, 1935), pp. 67–74.

[2] A study made by Vivian Weedon in the Bureau of Educational Research, Ohio State University.

free time are in general the same activities which they indicate that they prefer on the paired-comparison test.

THE other evidence is gathered from four case studies. The first is that of Walter, an eleven-year-old boy. It has been a well-known fact in his family that he climbs over fences, through trees, over house roofs, and along a narrow ledge on the outside of the house from one second-story window to another. His reputation in the family is that he climbs like a monkey. One day Walter came in and told his mother that Frankie, one of his playmates, was behind the garage smoking. Without a word from his mother he said he was not going to play with Frankie, and added, "Frankie swears, too."

From these evidences which were known before he took a paired-comparison test, we might expect that "climbing" would rank high and that "swearing and smoking" would rank low. He was given a paired-comparison test in which 19 activities were paired with each other, forming 171 pairs. As he read each pair, he decided which activity he would rather do.[3] Of the 19 activities included in the list, "climbing" and "doing experiments (radio, chemical, etc.)" ranked highest. They were each preferred to 17 of the 18 other activities as shown in Table I. "Smoking" ranked lowest: it was not preferred to any of the other 18 activities. "Swearing" was next lowest with a score of 1. It was preferred only to "smoking."

Evidences of Walter's behavior in everyday situations were recalled when it was found that "doing experiments (radio, chemical, etc.)" ranked high. For example, about the time he took the paired-comparison test, Walter spent much of his free time with an older boy who had a small chemical and electrical laboratory, and would monopolize most of the conversation at dinner talking about the experiments he had seen. The following Christmas he was given a small chemical set. He immediately established it in his room and spent much time playing with it. The family said, "He likes to play with those chemicals."

Judging from the reports of the family the expectation would be that "going to the movies" would rank high with Walter, for they said that he seldom missed an opportunity to go to the movies, and that he often stayed to see them

[3] The directions for the paired-comparison test were similar to those given in the previous article (*see* footnote 1).

through the second time. "Going to the movies," however, did not rank highest on the paired-comparison test, but fifth high. It was preferred to 11 other activities. This does not mean that Walter does not like to go to the movies; but when compared with the other activities, he prefers some of the others to it.

TABLE I

RATINGS GIVEN TO THE ACTIVITIES

LIST OF ACTIVITIES	CHILD ALONE		CHILD AND ONE PARENT		CHILD AND TWO PARENTS		
	Walter	Frances	Kathryn	Kathryn's Mother	Corwin	Corwin's Mother	Corwin's Father
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1. Go to an amusement park like Elitch Gardens	7	16	12	13	10	13	15
2. Climb on high places	17	13	11	16	13	12	7
3. Go to the movies	12	17	15	15	18	16	14
4. Do Hallowe'en tricks	11	10	5	7	5	6	3
5. Work on a job out of school hours for which you get paid	14	12	18	17	15	16	9
6. Build a fire	4	4	3	8	3	4	4
7. Tease animals	2	2	1	1	1	0	2
8. Swear	1	3	2	2	2	2	1
9. Take part in a stage play	12	17	10	6	14	16	18
10. Smoke	0	0	0	0	0	1	0
11. Go on a sight-seeing trip	7	13	17	18	14	18	17
12. Do scientific experimenting (radio, chemicals, etc.)	17	6	5	3	11	9	13
13. Go to an entertainment (play, circus, concert, etc.)	9	15	13	14	14	14	13
14. Go to a club meeting (like Scouts, Girl Reserves, etc.)	12	10	9	8	8	8	12
15. Make a collection (stamps, butterflies, etc.)	9	9	10	7	7	5	8
16. Make a picture (drawing or painting)	5	5	7	11	5	3	7
17. Make things with tools (woodwork, metal-work, clay modeling, sewing)	16	10	11	9	5	10	7
18. Play a musical instrument	12	8	15	12	17	11	10
19. Do original writing (stories, poems, songs, etc.)	4	1	7	4	9	7	11

Probably the most reasonable explanation of this lack of complete agreement between the two methods is that Walter does not have the opportunity to go to the movies as often as he has to do other activities in the list. When he has the opportunity to go to the movies, he makes the most of it, and observers are inclined to rate his behavior higher than other

activities on the scale of preference. This illustration represents a limitation of the observational method when the test situation is not well controlled. It is also conceivable that many activities, on the basis of ordinary observations of some children's behavior, may be judged to be enjoyable. In other words, observers may judge all of these activities as giving equal enjoyment to a child. To discriminate more finely between degrees of enjoyment it may be necessary to control the conditions so that the child will feel that he has equal opportunities to engage in the activities in the future. In other words, the child must know that it makes no difference which activity he chooses at the moment, that he will have opportunities at other times to choose the other activity, and that all that matters is what he likes to do now. Evidence about choices between two activities collected in a number of controlled situations like these ought to give finer discriminations of enjoyment.

The second case study is that of Walter's sister, Frances, who is fourteen years old. The activities which Frances indicated that she preferred by paired-comparison method were more difficult to predict, but the activities which she did not like were predicted more accurately. Before she took the paired-comparison test, there were a number of evidences which indicated that she did not like to "smoke," "tease animals," "do original writing (stories, poems, songs, etc.)," and "swear," for she was horrified when some women friends of the family smoked, and looked askance at people who swear. On several occasions she expressed her dislike for doing original writing in her school work. She did not like people who tease animals and never treats animals unkindly herself.

On the paired-comparisons test "smoking" was liked least as shown in Table I. It had a score of 0. All the other 18 activities were preferred to it. "Writing original stories, poems, etc." was the next least-liked activity. "Teasing animals" had a score of 2, and "swearing" had a score of 3. These results obtained by the method of paired comparisons checked closely with inferences about Frances' preferences for those activities drawn from her behavior in life.

Several years ago the evidence regarding climbing was similar to that of Walter's. Lately, however, she does not climb over buildings but often puts on her gym suit after school to climb trees and slide down the branches to the ground. One

might expect "climbing" to rank high on the paired-comparison test; it was sixth from highest, but was preferred to 13 other activities.

Two years ago Frances would not go to the movies of her own accord. Today she goes willingly but chooses the movies. This evidence may lead one to expect that going to the movies would rank above half the other activities but not the highest on the paired-comparison test. It tied for highest; it was preferred to 17 other activities.

When Frances was in a play at school, she came home quite thrilled and spent much time preparing for the program. She insisted that the family be present at the exercises. About six months later when she took the paired-comparison test the family did not expect "take part in a play" to rank highest on the paired-comparison test. It was tied with "go to the movies" for highest place on the scale of preference and was preferred to 17 other activities.

THE other two case studies were made in a different way. These studies were based on the assumption that parents who have close contact with their children will have opportunities for observing choices made by them and that from such evidence they will be able to draw conclusions about the likes and dislikes of their children. Hence, one source of evidence about children's preferences for free-time activities is the parents who may take the paired-comparison test of free-time activities and rank the choices as they think the child would prefer them. This method, of course, depends on how well the parent knows the child, and on the degree to which the parent makes the choices as he thinks the child would make them and not as he thinks the child should make them. Hence, this evidence of children's preferences for free-time activities may not be the best evidence to collect, but it at least can be considered as partial evidence, especially if one knows the parents and the children.

Kathryn is a high-school girl of sixteen. Her mother devotes much time to studying her and controlling Kathryn's behavior by modifying conditions wherever possible to draw out desirable responses from Kathryn. She can often predict accurately how Kathryn will react under certain conditions. Hence, if Kathryn takes the paired-comparison test and her

mother takes it as she thinks Kathryn would, the results should correspond closely. They took the test independently, and the correlation between the two results was .90. Kathryn's choices and those which her mother thought she would make are given in Table I.

Corwin is a high-school boy of sixteen. His mother and father took the paired-comparison test independently and were asked to take it as they thought Corwin would in showing his preferences for these 19 activities. The results are given in Table I. The correlation between Corwin's results and those of his mother was .87; between Corwin's results and those of his father was .77.

One who is acquainted with the parents and the child, can account for some of the widest divergences between the child's preferences and those expressed for him by his parents. For example, from other evidence one can explain the divergence in the results for the first activity, "Go to an amusement park like Elitch Gardens." Corwin seldom goes to an amusement park. When he had the opportunity to go to Elitch Gardens, he planned for the occasion, and after he returned talked about the good time he had had. His parents misinterpreted his behavior by placing this activity high on the scale of preference; Corwin did not place it that high, for eight other activities were preferred to "going to an amusement park." This example may also illustrate the necessity for controlling the situation so that observers may draw more valid conclusions from their observations of children's behavior. If Corwin had free opportunities to go to amusement parks, the conclusions drawn from his behavior might have been more closely in accord with his preference on the paired-comparison test.

On the basis of other evidence one could explain some of the other divergences but shortly the hazard of rationalization is encountered. It will suffice to point out that for the observer's conclusions to be valid, the situations in which the child's behavior occurs must be well controlled.

THIS discussion has two purposes: to illustrate techniques which may be used for checking conclusions drawn from paper-and-pencil tests with conclusions drawn from the observation of behavior in life situations, and to present some evi-

[*Continued on page 198*]

EDITORIAL COMMENT

Annual School Levies

For the past several years the Bureau of Educational Research, each fall has collected financial information on the city and exempted-village school districts of Ohio and the number and amount of school bond issues and special levies to be submitted to the electors in all school districts. When this information has been arranged in tables and summarized, it has been sent to the school superintendents throughout the state. In analyzing this information for the year 1935–36 in relation to similar facts for earlier years, there are three items which deserve attention.

The first of these has to do with reduction in the property-tax limitation from 15 to 10 mills which was approved as a constitutional amendment at the 1934 general election, effective on January 1, 1935. In 1929, the voters of the state, by a large majority, approved an amendment to the constitution fixing the tax limitation at 15 mills, a limit which had previously been statutory. Perhaps a word of explanation should be offered regarding the actual meaning of this limitation. In brief, it means that taxes in excess of 10 mills on each dollar of assessed property value can only be levied by a vote of the electorate. For certain types of levies such as those for current school expenses, only a majority vote is required, but in case of the levy required for school bonds, a 65–per cent vote is necessary for approval.

Since the 10-mill limitation was first effective January 1, 1935, the tax rates for the current school year should reflect that reduction. In 1934, the average property-tax rate for the 109 Ohio cities having populations of five thousand or more was 22.75 mills per dollar, while in 1935, it had been reduced to 18.73 mills, a reduction of 4.02 mills per dollar. For the exempted villages, that is, communities with populations of three thousand to five thousand, of which there are 62, this figure was reduced from 23.41 in 1934 to 18.6 mills in 1935, a reduction of 4.81 mills. When the schools alone are taken, it is found that the average levy for school purposes in the cities was 11.14 mills in 1934 and 8.68 mills in 1935, a reduc-

tion of 2.46 mills. In the exempted villages this levy was reduced from 11.42 mills in 1934 to 9.39 mills in 1935.

In the 301 county school districts for which data were available, similar reductions took place in both the levies for schools and for all purposes. Thus, it is seen that the reduction in the property-tax limitations from 15 to 10 mills, which was designed to afford relief to real property, is bearing results. Furthermore, the Foundation Program Law, enacted last June, provides for an annual state subsidy to the schools of approximately $48,000,000, which should further reduce the property tax for school purposes.

Another item of interest found in these tabulations is the sharp reduction in the amount of school bonds refunded or to be refunded in 1935, as compared with 1933 and 1934. The Ohio law provides that all bonds shall be "serial bonds maturing in substantially equal semi-annual or annual installments." However, in 1930 tax collections were so poor that boards of education were unable to pay maturing bonds, and in order to meet these obligations, transfers were made from the operating revenues. The results of this were so serious that the legislature in 1931 enacted a law which provided that with the approval of the Board of Inspection of Public Offices maturing bonds might be refunded. In 1933 and in 1934, bonds so refunded in the cities and exempted villages amounted to approximately $2,500,000, while for 1935 the amount is slightly less than one-third of the figure for the earlier years. This reduction, no doubt, is chiefly due to better tax collections. In some districts these have amounted to more than 100 per cent because of the payment of delinquent taxes.

The third item of interest is the extent to which Ohio school districts are preparing to participate in the Federal Emergency Administration of Public Works, generally known as the *PWA*. This program, which was a part of the National Industrial Recovery Act, enacted in June, 1933, provided that for approved projects of a public character the Federal government would make an outright grant of 30 per cent of the cost and a loan for the remaining 70 per cent at an interest rate not to exceed 4 per cent. That fall, bond issues to the amount of $3,400,000 were submitted to the voters in order to participate in this subsidy. This program is now being continued as a part of Works Relief Administration for which an appropriation of

$4,800,000,000 was made last spring. The chief difference between it and the earlier one is that the grant has been increased from 30 per cent to 45 per cent. Bond issues amounting to $13,000,000, or approximately four times that of the earlier program, are being submitted to the voters for school-building projects under the provisions of this act. In 1933, only a majority vote was required for these bond issues. Last spring, however, the legislature amended the law to require 65 per cent which will be, no doubt, a considerable factor in the number of these issues which are approved.

T. C. HOLY

THE College of Education of the Ohio State University, as a part of its program better to serve the educators and general public of the state, has arranged a series of radio broadcasts dealing with the provisions and significance of the school legislation enacted by the General Assembly last spring. These new laws make innovations in regard to school finance, standards in the preparation of teachers, and the provision of textbooks which are of extraordinary importance in the advancement of education in Ohio. Many questions are arising and will arise over the specific interpretation and application of these enactments in particular cases. It is important, therefore, that all those directly or indirectly concerned with the public schools should have a clear comprehension of their content and purport. The course will be broadcast by W. G. Reeder and E. E. Lewis.

The first half of the course, given by Mr. Reeder, will be devoted to a consideration of the Foundation Program, the way it is to be financed, and its significance for the elimination of waste and the extension of educational opportunity. In the latter half of the course, Mr. Lewis will deal with the probable results of the new certification and textbook laws in improving both teaching personnel and materials of instruction.

These lectures will be broadcast over Station WOSU (570 kilocycles) from 8:30 to 8:45 Wednesday evenings, from October 2 to December 18. All persons in any way concerned with the schools are urged to listen to this series of broadcasts. Anyone interested may receive a syllabus of the course by sending his name and address to Station WOSU, Ohio State University, Columbus, Ohio. Requests for the syllabus will not involve any expense or obligation.

A. W. ANDERSON

Pupil-Personnel Staffs in 1934

By ARCH O. HECK

DURING the past year many requests have been received from school superintendents and from interested workers in some one of the various pupil-personnel fields for information as to which cities provide given services, what services are provided by a given group of cities, or how many staff members are had by particular cities. So important has this request appeared that despite several serious difficulties, a report for 1934, just as asked for, is being made at this time. The chief difficulty was in setting up a uniform table which would show the facts secured with a fair degree of accuracy without the necessity of setting up a separate table for each city.

Many cities in sending in their data set up tables of their own, using an entirely different terminology from that which appeared upon the original inquiry blank; other cities used the original blank but scratched off many titles and inserted others; still other used copious footnotes to explain differences in title as well as differences in function.[1] In compiling the tables the original terminology has been used with minor changes.[2]

The data are reported in the tables just as they were recorded on the original blanks. If a city marked "1" on the inquiry blank after director of attendance, but stated in a footnote that this official is called a "supervisor of attendance" instead of a "director," he has been reported here as director. It has been assumed that if an entry was made after one of the original headings that the one reporting considered that this official, despite a different name, functioned in the capacity designated by the title listed on the blank.

An examination of Columns 2, 3, 4, and 5 of Table I shows that 78 of the 92 cities reporting have either a director of

[1] For these reasons, if the reader finds that the writer has misinterpreted the data sent in, he merely asks that he not be censured too severely for the misinterpretation.

[2] Data shown in Table I of the section of this report which appeared in the EDUCATIONAL RESEARCH BULLETIN for September and the tables here are identical. There is, however, a slight difference in organization. Totals of Columns 2, 3, 4, and 5 of Table I here equal the total number of directors in Table I (September). Included in Column 2 of Table I here are two directors of placement, one of pupil personnel, and one of psychology. In Table I (September) dentists, dental hygienists, specials, and attendance supervisors are shown separately. In this article these are all grouped together in an open table given on page 191. This was done because these particular headings did not appear in the original inquiry and therefore probably do not represent all officials of these types in all the 92 cities and further because of lack of space for listing these items.

TABLE I

THE FOUR COMMONEST TYPES OF DIRECTORS IN THE PUPIL-PERSONNEL DEPARTMENTS

States and Cities	Of Attendance	Of Visiting Teachers	Of Children's Clinics	Of Census
(1)	(2)	(3)	(4)	(5)
Alabama				
Birmingham	1	....	1	....
California				
Long Beach	1	....	1	....
Los Angeles	1	2	....	....
Oakland	....	....	1	....
San Diego	1*	....	.3	....
San Francisco	1	....	1	....
Colorado				
Denver	1	....	....	....
Connecticut				
Bridgeport	1	....	....	1
Hartford	....	1	....	1
New Haven	1	....	....	....
Delaware				
Wilmington	1	....	....	....
Dist. of Col.				
Washington	1	....	....	....
Florida				
Miami	1	....	....	....
Georgia				
Atlanta	1	....	....	....
Illinois				
Chicago	1	....	1	....
Indiana				
Evansville	1	....	....	....
Fort Wayne	1	....	1	....
Gary	1	....	....	....
Indianapolis	1	....	....	....
South Bend	1	....	....	....
Iowa				
Des Moines	1†	....	....	....
Kansas				
Kansas City	1	....	....	....
Wichita	1	....	....	....
Kentucky				
Louisville	1	....	....	....
Maryland				
Baltimore	1	....	....	....
Massachusetts				
Boston	1	....	....	....
Fall River	....	....	1	....
Lowell	1	....	....	....
Lynn	1	....	....	....
New Bedford	1	....	....	....
Springfield	1	....	....	....
Worcester	1	....	1‡	....
Michigan				
Detroit	1	....	1§	....
Michigan [*Cont.*]				
Flint	1	....	1	....
Grand Rapids	1	....	....	1
Minnesota				
Duluth	1	....	....	....
Minneapolis	....	....	1	....
St. Paul	1	....	....	....
Missouri				
Kansas City	1	1	....	....
St. Louis	1	....	....	....
Nebraska				
Omaha	1	....	....	....
New Jersey				
Camden	1	....	....	....
Jersey City	1	1	....	....
Newark	2‖	....	1	1
Patterson	1	....	....	....
Trenton	1	....	....	....
New York				
Albany	1	1	....	1
Buffalo	1	....	1	1
New York	2‖	....	2‖	....
Rochester	1	2¶	....	....
Syracuse	1	....	....	1
Yonkers	1	....	....	....
Ohio				
Akron	1	....	....	....
Cincinnati	1	1	1.8	1
Cleveland	3**	1‡‡	....	....
Columbus	1	....	....	....
Dayton	1	....	....	....
Toledo	1	....	....	1
Youngstown	1	....	....	....
Oklahoma				
Oklahoma C.	1	....	....	....
Tulsa	1††	1§§	....	....
Oregon				
Portland	1	1	1	1
Pennsylvania				
Philadelphia	2§§	....	....	....
Pittsburgh	1	....	....	....
Scranton	1	....	....	....
Rhode Island				
Providence	....	1	....	....
Tennessee				
Chattanooga	1	....	1	....
Knoxville	1	....	....	....
Memphis	1	....	....	1

TABLE I [*Continued*]

States and Cities	Of Attendance	Of Visiting Teachers	Of Children's Clinics	Of Census	States and Cities	Of Attendance	Of Visiting Teachers	Of Children's Clinics	Of Census
(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)
Texas					Virginia				
Dallas	....	....	....	1	Richmond	1	....	....	....
El Paso	....	....	....	1	Washington				
Fort Worth	....	....	....	1	Seattle	1	....	1	....
Houston	....	....	....	1	Wisconsin				
San Antonio	1	....	....	....	Milwaukee	1	....	....	....
Utah									
Salt Lake C.	1	1‖‖	1	1	Total	74	14	20.1	16

* Of bureau of child reference and council.
† Of pupil adjustment, attendance, and auxiliary agencies.
‡ Of child study.
§ Of glandular clinics.
‖ One of these is an assistant director.
¶ One director of visiting teachers and one director of psychology.
** Two assistant directors.
†† Of attendance and visiting teachers.
§§ Employment superintendent.
‖‖ Of pupil-personnel department.
‡‡ Placement director.

attendance, a director of visiting teachers, a director of the children's clinic, or a director of the census. Only 14 cities with populations of one hundred thousand and over have not found it necessary to have appointed a director of some one or more of these divisions. Three cities report directors for each of these four divisions; 3 cities report directors for at least three of them; and 24 cities report directors for some two of them. This leaves 48 cities with a director of just one division.

Of the 48 cities reporting only one director, 40 had directors of attendance; of the remaining 8 cities, one reported a director of visiting teachers; three, directors of children's clinics; and four, directors of the census. The four cities reporting census directors were Dallas, El Paso, Fort Worth, and Houston. The three cities reporting directors of children's clinics were Oakland, Fall River, and Minneapolis. Oakland reports that this department is called "child welfare" and that it includes attendance, health, and counseling; the 1934 report states that an "assistant superintendent in charge of individual guidance includes all these" activities. This represents a move to bring into closer administrative relationship the various pupil-personnel services. Fall River reported a director of the children's

clinic, 5 attendance officers, 6 school physicians, and 10 school nurses but gave no explanation of these data.

Minneapolis in 1932 reported a director for all 4 divisions; since that date a reorganization has taken place; an assistant superintendent is now in immediate charge of all these pupil-personnel services but a director of the child-guidance clinic has been retained. This again is clearly an attempt to unify all pupil-personnel work.[3] Providence reports a supervisor of visiting teachers; again we find reported a reorganization in which an assistant superintendent has been placed in charge of attendance, census, guidance, and research, thus unifying several pupil-personnel agencies; a supervisor of visiting teachers subordinate to the assistant superintendent has been retained.[4]

THE total number of pupil-personnel workers reported varies greatly among cities with populations of one hundred thousand and more. Table II shows this variability; the contrasts are striking. One city reports 505 pupil-personnel workers whereas another city reports only one. The tabulation shows how the cities distribute themselves with respect to the total number of workers. According to this table, 45 cities have less than twenty-five workers; 73 have less than fifty each; and 81 have less than one hundred. There were only 11 cities with one hundred or more such workers.

This variability may be accounted for in several ways: First, some cities demand more workers since the range of population is from slightly above one hundred thousand to over six million. We would expect, therefore, approximately 60 times as many workers in the latter, as in the former. Second, a few cities have services which are not supported by the board of education and so were not reported. Medical service, for example, was not reported by 14 cities, although most of them actually have it provided by other than school agencies. Column 4 of Table II shows that the city reporting 505 workers did not report medical service; two cities having from 125 to 135 workers failed to report the service; and 11 other cities having much smaller groups of workers failed to report it. Third, still other cities, evidently, have not been able to finance these serv-

[3] More will be said about this tendency in the last article of this series, *see* EDUCATIONAL RESEARCH BULLETIN, XIV (November 13, 1935), pp. 214–16.

[4] If other cities have made similar changes but have not reported them thus far, the writer would appreciate word to that effect.

ices, have not seen the necessity for them, or have not been able to convince the local board of the necessity of providing them.

Table II also presents evidence which partially explains the lack of directors in 14 cities. These cities, as shown in Column 3, have less than thirty-five workers; 13 of them have less than twenty-five; and 7 of them have less than ten. The need for a director is not so great under these circumstances. It would seem, however that with ten or more workers, a director might have been employed quite profitably.

TABLE II

CITIES ACCORDING TO TOTAL NUMBER OF PUPIL-PERSONNEL WORKERS REPORTED

Number of Workers	Number of Cities	Number with No Directors	Number with No Medical Service	Number of Workers	Number of Cities	Number with No Directors	Number with No Medical Service
(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
505–509	1	.....	1	70–74	.....	.....	.....
355–359	1	.....	.....	65–69	1	.....	.....
250–254	1	.....	.....	60–64	.....	.....	.....
165–169	1	.....	.....	55–59	3	.....	1
160–164	1	.....	.....	50–54	1	.....	.....
140–144	1	.....	.....	45–49	4	.....	.....
130–134	1	.....	1	40–44	4	.....	1
125–129	2	.....	1	35–39	.....	.....	.....
115–119	2	.....	.....	30–34	8	1	2
90– 94	1	.....	.....	25–29	12	.....	1
85– 89	1	.....	.....	20–24	12	3	1
80– 84	.....	.....	.....	15–19	8	2	.....
75– 79	1	.....	.....	10–14	10	1	1
				5– 9	10	6	1
				1– 4	5	1	3
				No record	1	.....	.....
				Total	93	14	14

ONE of the significant facts presented by Table III is the existence of great gaps in various types of pupil-personnel service. Any city with a population of one hundred thousand would seem large enough to warrant the employment of at least one full-time psychologist to serve the public schools; such a suggestion would seem to be most conservative in view of present-day needs for such service. Rochester reports 14 psychologists; one familiar with the service rendered by such a group would hardly question its worth. Despite the need, however, we find 46 cities, or exactly 50 per cent of the group re-

porting, which have no psychological service; 23, or half of the remainder, have one each, with 4 more cities having only the part-time services of one psychologist. This leaves 19 cities which provide two or more psychologists each; 9 of these have only two each.

As we become more familiar with the effectiveness of psychiatric service in dealing with many of the problem children of the school, it would seem that this service would be needed in any city with a population of one hundred thousand. New York does provide 6 such workers but there are 73 cities, or 79 per cent of the group reporting, which have no such service. Of the 19 providing it, 4 have the part-time service of one worker; 12 have one each; one reports two; another, four; and New York City, six.

Seventy-five cities reported school nurses; the number varied, however, from 1 to 98 per city. Only 4 cities reported 50 or over; 10 reported from 25 to 49; 31 reported from 10 to 24; 20 had from 5 to 9; and 9 had less than 5. Surely the school children of a city with a population of one hundred thousand cannot be adequately cared for by one nurse if an effective program of health service is to be carried out.

Visiting-teacher service is not being used so widely as it deserves to be in dealing with problem children. Forty-eight cities do not have it; 15 report only one visiting teacher each, and 7 only two each. This leaves 22 cities which reported three visiting teachers or more; 5 of these reported more than fifteen. Obviously, even 15 visiting teachers would not satisfactorily serve a city of one hundred thousand if one such teacher is needed for every one thousand pupils enrolled. Only 8 cities reported more visiting teachers than were reported by Cincinnati, and yet the service in Cincinnati fails to reach great masses of public-school children.

Of the 92 cities, 79 have attendance officers: 37 of these cities, however, have only three such officers or less; 24 more have from 4 to 8; 5 more have from 13 to 15; and 6 more have 20 or more each. The remaining 7 scatter widely as to numbers of officers reported: Boston and Newark reported 31 each; Detroit and Los Angeles reported 51 each; Philadelphia, reported 70; Chicago, 108; and New York, 344.

Of the 13 cities which reported no attendance officers, 9 reported visiting teachers; in most instances the reports indi-

TABLE III

Pupil-Personnel Workers Reported by the Cities

States and Cities	Attendance Officers	Visiting Teachers	School Doctors	School Nurses	Psychologists*	Clerks	Total Workers†
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Alabama							
Birmingham	3	.....	3	1	3	2	16
California							
Long Beach	2.5	6	1	14	1	2	28.5
Los Angeles	51	15	47	83	2	50	251
Oakland	5	.....	2.7	18	1	5	34.7
San Diego	2	3	1	19.8	.....	3	31.3
San Francisco	13	.....‡	12	32	4	6	69
Colorado							
Denver	8	1	7	21	1	3	42
Connecticut							
Bridgeport	2	.....	.....	.....	1	1	6
Hartford	7	2	14	21	.....	1	47
New Haven	2	.....	.....	.....	1	.....	4
Delaware							
Wilmington	5	.....	2	6	.....	1	20
D.C., Washington	15	.....	15	12	.....	11	56
Florida							
Jacksonville	.....	.....	1	.....	.....	.....	1
Miami	1	.....	.....	4	.....	1	9
Tampa	4	.....	1	1	.....	1	7
Georgia							
Atlanta	3	.....	2	13	.....	3	22
Illinois							
Chicago	108	.....	.....	.....	5	10	125
Peoria	.....	1	1	3	.....	1	8
Indiana							
Evansville	2	.....	1.5	7	.....	.....	13.5
Fort Wayne	2	.....	8	10	2	2	26
Gary	13	.....	2	9	1.5	1	27.5
Indianapolis	.....	18§	.....	.....	.....	7	26
South Bend	3	.....	.....	10	.5	.....	14.5
Iowa							
Des Moines	.....	4	1.7	19	.....	3	28.7
Kansas							
Kansas City	4	.....	.....	1	.....	2	8
Wichita	.....	4	1	8	.....	.....	14
Kentucky							
Louisville	2	22	.....	.....	3	4	32
Louisiana							
New Orleans	8	2	7	14	.....	1	32
Maryland							
Baltimore	24	1	.....	.....	4	1	31
Massachusetts							
Boston	31	.....	68	66	.....	1	168
Fall River	5	.....	6	10	.....	.....	22
Lowell	2	.....	.....	.....	.....	1	4
Lynn	3	1	5	5	1	1.5	17.5
New Bedford	3	2	1	9	1	.....	17
Somerville	1	1	8	5	.....	2	22
Springfield	4	1	17	19	1	4	47
Worcester	6	.....	11	28	.....	3	50

TABLE III [*Continued*]

States and Cities	Attendance Officers	Visiting Teachers	School Doctors	School Nurses	Psychologists*	Clerks	Total Workers†
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Michigan							
Detroit	51	.....	.....	.....	2	45	134‖
Flint	3.7	.....	1.8	13	.....	2.8	23.3
Grand Rapids	6	1	1	.....	.....	5	18
Minnesota							
Duluth	.....	.....	3	10	.....	.....	14
Minneapolis	.....	27	9	61	3	15	116
St. Paul	1	7	4	25	1	2	44
Missouri							
Kansas City	7	1	.....	48	.....	1	59
St. Louis	22	.....	13.5	38	2	2	78.5
Nebraska							
Omaha	3	.....	1	14	.5	1.5	23
New Jersey							
Camden	7	.....	7	9	.....	1.5	26.5
Elizabeth	5	1	4	8	.....	1	21¶
Jersey City	23	6	22	31	3	6	93
Newark	31	3	23	48	3	13	125
Patterson	6	.....	7	12	.....	.....	26
Trenton	7	2	5	13	.....	2	30
New York							
Albany	3	2	5	13	.....	4	30
Buffalo	23	.....	33	45	5	8	117
New York	344	15	.....	.....	7	132	505
Rochester	13	17	.....	.....	14	11.5	58.5
Syracuse	.....	1	13	14	2	9	41
Utica	3	.....	7	8	1	.....	19
Yonkers	4	1	7	10	3	1	27
Ohio							
Akron	.....	.....	1	.....	.....	2	4
Canton	3	.....	.5	4	.....	1	8.5
Cincinnati	8	7	16	34	7.5	10.3	88.6
Cleveland	27	.....	30	48	8	20	163**
Columbus	1	6	1	9	1	2	21
Dayton	3	1	3	4	.....	1	13
Toledo	1	.....	9	10	.....	3	25
Youngstown	4	.....	1	8	.....	2	16
Oklahoma							
Oklahoma City	1	.....	.....	.....	.....	1	3
Tulsa	.....	6	1	.....	1	....††	10
Oregon							
Portland	4	4	5	20	3	101	141
Pennsylvania							
Erie	3	2	2.5	9	2‡‡	1.5	20
Philadelphia	70	36§§	107	98	.....	33	358
Pittsburgh	29	7	.....	.....	1	2	40
Reading	1	1	2	11	1	2.5	18.5
Scranton	3	.....	8	6	2	.....	25.5
Rhode Island							
Providence	.....	12	5	17	4.5	7	46.5
Tennessee							
Chattanooga	3	.....	1	5	1	2	14
Knoxville	4	.....	3	5	.....	.5	13.5

TABLE III [*Continued*]

States and Cities	Attendance Officers	Visiting Teachers	School Doctors	School Nurses	Psychologists*	Clerks	Total Workers†
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Tennessee [*Cont.*]							
Memphis	6	.....	.....	.....	1	4	13
Nashville	3	.....	4	2	.....	.....	9
Texas							
Dallas	.....	.....	2	19	.....	3.5	25.5
El Paso	1	.....	.....	3	.....	.....	5
Fort Worth	1	.....	1	16	.....	1	20
Houston	3	.....	4.4	21	1	3	33.4
San Antonio	.....	2	3	9	.....	1	16
Utah							
Salt Lake City	3	1	1	12	1	3	25
Virginia							
Norfolk	2	.....	2	9	.....	.....	13
Richmond	3	.....	2.5	15	1	1	23.5
Washington							
Seattle	5	3	2	24	5	5	46
Spokane	1	1	1	5	.....	.5	8.5
Tacoma	1	.....	1	5	1	1	9
Wisconsin							
Milwaukee	14	4	.....	.....	3	2	24
Grand total	1,115.2	261	632.3	1,316.8	124.5	614.5	4,306.9

* Psychiatrists are included in this classification. They are employed in the following systems; the number in each instance is enclosed in the parentheses: Oakland (1), San Francisco (2), New Haven (pays $1,000 for help from private clinics), Fort Wayne (1), Gary (.5), Detroit (1), Minneapolis (1), Jersey City (1), Newark (1), Buffalo (4), New York (6), Syracuse (1), Utica (1), Portland (1), Erie (1 free), Providence (.5), Richmond (.5), Milwaukee (1).

† The discrepancy between this figure and the sum of the items in the row is due to the fact that certain miscellaneous officers mentioned by the superintendent and the directors mentioned in Table I are included. The numbers of miscellaneous officers will be found in the open table on page 191.

‡ Twenty-six home teachers are reported but the explanation indicates they were not visiting teachers.

§ Listed as social workers but function much like ideal attendance supervisors or visiting teachers of progressive school systems.

‖ Eleven district attendance officers, 15 mental examiners, and 8 miscellaneous.

¶ One dentist, one eye, ear, and throat specialist.

** Six full-time dentists, 10 hygienists, and 10 assistant hygienists.

†† Using student help.

‡‡ Free.

§§ Listed as home and school visitors.

cated that these visiting teachers had taken over the job of the attendance workers except that they did not carry cases to court. Two of the remaining four had directors of attendance; these directors constituted the entire staff; another had a director of census who was responsible for attendance; and the fourth, Jacksonville, was the only city whose report seemed to indicate that it was entirely destitute of attendance service of any sort.

Officers with titles which vary from common practice are given here as a miscellany. The names of the cities having such officers are listed, and the officers employed in each classification are indicated by the number in parentheses:

Health teachers	Birmingham (2)
Dental workers	Oakland (2), San Diego (1.2), Wilmington (5), Miami (2), Peoria (2), Evansville (2), Somerville (5), Grand Rapids (3), Omaha (2), Camden (1), Scranton (5.5)
Child-labor inspectors	Washington, D. C. (2)
Oral hygienists	St. Paul (3)
Social-case workers	New York (3)
Statistician in psychological laboratories	Cincinnati (1)
Attendance supervisors	Philadelphia (12)

THESE figures indicate rather clearly definite gaps in attendance service. A city of one hundred thousand with only one attendance worker can hardly hope to cope effectively with all the non-attendance problems of the school system. There is, moreover, another variation in the service which is not apparent in a formal report. Some cities at present have high standards for attendance service; the old police officer has been eliminated and experience and training of a high order are demanded; in these cities attendance workers are trying to find the causes of non-attendance; attendance is being improved by a broad attack upon these causes rather than indiscriminately applying punishment to children and to parents.

There is a suspicion abroad that other cities are not attacking their non-attendance problems in this way; that they still emphasize the police technique; and that their attack upon non-attendance largely ignores the discovery and removal of causation. If the suspicion be correct, the gaps in effective attendance service are far greater than even this report would indicate. There is a real need for a study of the effectiveness of attendance service in various cities; while real, it is most difficult. It would be possible, however, were the departments interested, to make at least an analysis of the training of present attendance workers.

READINGS

STEWART, A. W. "The Effects of State Scholarship Tests," *High School Teacher*, XI (March, 1935), pp. 78–79, 85.

Because Ohio has given state scholarship tests each year since 1928, this article should be of special interest to the school people of the state. It is written primarily in answer to an indictment of such testing programs by Harl Douglass in the September, 1934, *School Review*. The author briefly reviews the state scholarship organization in Ohio and then summarizes the results of an inquiry sent to the 137 test winners in 1934 on the assumption that bad effects resulting from such a testing program would most likely appear among the winners. Responses came from 102 schools. In answer to the question, "Did the pupil enter the contest by choice or was he urged to participate?" 92 entered by choice, 9 were urged to enter, and one did not answer the question.

Further questions dealing with the pupil's understanding of the subject, his interest and participation in other school projects and activities, his social attitudes, and personality traits were included. Based on the analysis of these replies and the author's rather close contact with the Ohio testing program, he concludes that, "if the responses of these teachers and principals are to be accepted as valid, there is certainly no evidence that the District Scholarship Tests in Ohio are a hindrance to progressive educational practice."

ANTON, WILLADENE. "Types of Report Cards in Use," *School Executives Magazine*, LIV (July, 1935), pp. 332–33, 346.

Report cards are shifting toward the elimination of grade markings and the substitution of broader estimates of achievement in the matter of scholarship and toward increased emphasis upon factors of pupil adjustment. Many of the newer report forms either formally or informally give the teacher's judgments as to the growth of the pupil in ability to get work done, in ability to work to capacity, and in habits of work and habits of citizenship. Some of the schools have discontinued formal cards entirely and send general statements regarding the many-sided progress of the pupil. The article gives summaries and examples of report procedures used in eleven schools, whose procedures seemed distinctive enough for selection from a large number of city school report practices.

HOCKETT, JOHN A. "Reading Interests of Z-Section Pupils," *Elementary School Journal*, XXXVI (September, 1935), pp. 26–34.

There is a need for good literary material adapted to the interests and reading abilities of slow pupils of nine to twelve years of age; the "book must be simple but not 'babyish.'" This article reports a study of the types of books most widely read and best liked by such children. Lists of the books that they had read were secured during 1933–34 from approximately five hundred boys and girls classified in Z-sections of Grades IV, V, and VI in six schools; one hundred of these titles were submitted to 400 Z-section pupils. The pupils checked the titles of the books that they had read and

indicated the three that they liked best. The most widely read book was Bannerman's *Story of Little Black Sambo*, which had been read by 310 of the 400 pupils. Burroughs' *Tarzan of the Apes* was the most popular, it was selected as one of three best books by 44 per cent of the 107 pupils who had read it. Strong sex differences for certain books were revealed.

There were significant differences in the reading difficulty of the various books as revealed by the data when the cumulative percentage of pupils reporting each book at each reading age was calculated. *Little Black Sambo* contains only 228 different words, 64 sentences, and 1,078 running words. In contrast, *Alice's Adventures in Wonderland* is a long and difficult book for retarded readers. One hundred thirty-four pupils had read both books, but only three pupils selected both as a "best" book. The article presents other interesting data concerning the reading difficulty and interest appeal of sixty-four books selected from an original list of more than a thousand titles.

FRANK, J. O., AND LUNDSTED, LESTER. "Historical Material in High-School Chemistry Texts," *Journal of Chemical Education*, XII (August, 1935), pp. 367–69.

An examination of twenty of the most widely used textbooks for high-school chemistry reveals considerable divergence of opinion in the use and presentation of historical material. Short historical items scattered through the textbooks show little consistency in their selection: the discovery of bromine by Balard may be discussed while mention of Moissan and fluorine may be omitted. Of the 336 different names of important persons in chemical history, only four of the names are mentioned in all of the textbooks. There are 247 biographical accounts of 48 different persons and 253 photographic cuts of 50 different persons in the 20 textbooks. In spite of the inconsistencies there is an increasing realization of the potentiality of historical material as a creator of interest.

PERHAM, BEATRICE. "An Environment for Music," *Progressive Education*, XII (October, 1935), pp. 409–12.

Every teacher and every parent ought to have an opportunity to read this article. Miss Perham rightly emphasizes the necessity of an excellent musical environment if taste is to grow properly.

The following two paragraphs are applicable to all fields dealing with taste and appreciation:

"One of the surest ways of *perverting* taste is to set standards in advance of the maturity of children. The new philosophy of education and its attendant psychology have taught us that appreciation, courtesy, and moral fibre are developed *as a part* of education. If a music teacher accepts this statement as truth, then the matter of appreciation will have to come about through other channels than those of a prescribed course. She cannot bring the music of Bach or Brahms before the children and say, 'This is good, therefore you should learn to like and understand it.' The process is not so easy nor so simple as that. And the gaps which are bound to exist between the level of the child's present understanding and taste and the adult's conception of what the child *should* enjoy at that level, are too great.

"A more safe and sound procedure is to recognize the likes and dislikes of the child *at his own level*, and then help him to grow *at his own rate* to

continuously higher levels. The important thing is that the child exercise his own judgment and develop his own taste for beauty as he grows from one level to the next. He must set up his own standards of excellence, and the teacher's responsibility is to see that his standards are constantly mounting to higher levels."

WOODRING, MAXIE NAVE, AND FLEMMING, CECILE WHITE. "Recent Trends in Study," *Teachers College Record*, (October, 1935), pp. 27–49.

Excellent summaries of recent trends in teaching how to study and in related activities are accompanied by annotated bibliographies covering the period from 1928 to date. The areas included are the assignment, the laboratory procedure, the library, home study, the study hall, reading habits, general study procedures, and techniques in specific fields.

In Paper Covers

BETTS, EMMETT ALBERT. *Reading Disabilities and Their Correction*. Detroit, Michigan: C. C. Certain, Box 67, North End Station, 1935.

This third annual research bulletin of the National Conference on Research in Elementary School English contains a summary of 43 recent research studies in the field of reading difficulties, and an annotated bibliography of 46 books and articles on reading disabilities. Critical evaluations of this yearbook by Arthur J. Gates, Donald D. Durrell, and William S. Gray appeared in the April issue of the *Elementary English Review*.

A few copies of the second yearbook, *A Critical Summary of Selective Research in Elementary School Composition, Language, and Grammar*, are still available. The price of either pamphlet is 50 cents each.

ROBERT C. POOLEY
University of Wisconsin

"Salaries of School Employees, 1934–35," *Research Bulletin of the National Education Association*, XIII (March, 1935), pp. 37–68.

This bulletin presents the findings of the Seventh Biennial Survey of city teachers' salaries conducted by the Research Division of the National Education Association. This study includes 90 of the 93 cities with populations of more than one hundred thousand, 196 of the 233 cities with populations from thirty thousand to one hundred thousand, and 1,703 of the 2,830 cities with populations from twenty-five hundred to thirty thousand. Of the 3,156 cities with populations of more than twenty-five hundred 1,989, or 63 per cent, are included in this survey.

Space here permits only a few of the facts found in this study of the salaries of 386,376 school employees. The salary reductions for elementary-school teachers in 1934–35 as compared with 1930–31 ranged from 9.25 per cent in cities with populations of over one hundred thousand to 17.3 per cent in cities with populations from twenty-five hundred to five thousand. As compared with 1932–33, the reductions ranged from 1.28 per cent in the large cities to 11.75 per cent in the small ones.

For junior–high-school teachers, the reductions in 1934–35 as compared with 1930–31 ranged from 11.5 per cent in cities with populations of more

than one hundred thousand, to 17.28 per cent in cities with populations from twenty-five hundred to five thousand. For high-school teachers, reductions during the same period ranged from 10.8 per cent in the larger cities to 18.55 per cent in the small cities. Salaries for principals, deans, department heads, and vice-principals are also given. This bulletin also has a supplement giving information on rural teachers' salaries by states. For school officials and others interested in salaries and salary trends, this is a valuable contribution.

T. C. HOLY

MENDENHALL, JAMES E., AND MENDENHALL, MARCIA E. *Influence of Familiarity upon Children's Preferences for Pictures and Poems.* New York: Teachers College, Columbia University, 1933. x+74 pp.

The most significant outcome of this study is probably the suggestion that preferences and appreciations are complex matters, and that familiarity sometimes strengthens and sometimes weakens the various component reactions. The experiment reported was performed at Lincoln School. Presumably pupils there are experienced in making judgments based on knowledge. The complexity of appreciation and its dependence upon a number of previous judgments, therefore, make it doubtful whether the generalizations as to what is the basis for the choices should apply to children other than those in Lincoln School.

More important than the experiment itself, however, is the introductory chapter which contains an excellent criticism of the teaching of aesthetics in the United States. Much of the criticism could as well be directed toward all phases of the traditional curriculum. Excellent also is the emphasis the authors give to the need for careful study in the field of aesthetic appreciation, and their suggestion that there must be co-operation of "philosophers, critics, painters, writers, and psychologists."

LOU L. LABRANT

ARTHUR, GRACE. *A Point Scale of Performance Tests.* New York: Commonwealth Fund. Vol. I., *Clinical Manual,* 1930. Vol. II., *The Process of Standardization,* 1933.

CORNELL, ETHEL L., and COXE, WARREN W. *A Performance Ability Scale.* Yonkers on Hudson, New York: World Book Company, 1934.

Pintner and Paterson published in 1917 a pioneer standardized scale of "performance tests." In one sense the response of the subject to any type of test is a performance, but the term has been generally used for tests which call for non-verbal responses, various form boards being typical examples. The use of various revisions of the Binet-Simon scale, which have given scores of satisfactory reliability which correlated well with ability for school work, has continued to be the principal psychometric technique in rating intelligence. "What is his *IQ*?" has been asked, and the Stanford-Binet intelligence quotient has usually been the answer. But the responses in this and other revisions are mainly verbal, and careful psychological examining of individuals has generally included a certain number of performance, or non-verbal, test techniques. In the case of deaf subjects or those handicapped in the use of English the advantage of such tests is obvious.

The two recent performance scales under review have much to commend them. The statement of the "functions of a performance scale" in the first

chapter of the Cornell-Coxe manual is excellent. Psycho-clinicians in training should read and re-read it, no matter what performance scale they expect to find most helpful in their field of specialization in clinical practice. Both scales show careful work in standardization and weighting of test items, and both manuals are satisfactory in their specifications for test procedures and scoring. The Arthur scale is in dual form, thus providing for retesting by a somewhat different, but equivalent, procedure. Most of the test items are not new. The Arthur scales include twelve of the fifteen tests in the Pintner-Paterson scale. The Cornell-Coxe scale includes two. Both use adaptations of Kohs' Block Design Test, and both include the Healy Pictorial Completion Test II.

Both of these scales are practical and are already being used extensively. They are best adapted to use with children of school age. Point scores in each are translated into mental-age scores and intelligence quotients. One regrets that the authors, in spite of careful statistical work, have not given tables which make it possible to translate point scores into percentile ranks and standard-deviation values, as Miss Stutsman has done in her excellent standardization of the Merrill-Palmer performance scale for preschool children. Such measures of divergence are often much more significant in the interpretation of test data for clinical purposes and less likely to be misunderstood than mental-age scores and intelligence quotients. They also avoid the misleading use of such "mental ages" (sic) as nineteen, twenty, and twenty-one years, which appear on page 77 in the Arthur manual. The central tendency or median score for age-groups for many of the test items in either of these scales, or in similar performance tests, increases very slowly and with differences of doubtful validity beyond thirteen or fourteen years. Beyond these ages measures of divergence within given age groups would certainly seem desirable both from the standpoint of scientific standardization and of the practical interpretation of test data.

FRANCIS N. MAXFIELD

Books to Read

HOLBECK, ELMER S. *An Analysis of the Activities and Potentialities for Achievement of the Parent-Teacher Association, with Recommendations.* New York: Teachers College, Columbia University, 1934. vii+126 pp. (Teachers College, Columbia University, Contributions to Education, No. 601)

An attempt is made in this study to analyze the reasons underlying the disparity between the achievements of the parent-teacher association and its potentialities for achievement. As a basis for this study the author used the answers to one hundred questionnaires returned by as many local parent-teacher groups. An intensive analysis is also presented of the activities of ten individual local associations in towns located in New York, New Jersey, and Connecticut.

The results of this exhaustive study lead the author to state that "the most serious single factor which has militated against the success of the parent-teacher association has been its wide diffusion of interest, its inability to understand that its purpose and function, in fact its only excuse for exist-

ence, is its potentiality as a means of educating parents in order to make those parents realize their job and understand their duties to the child and to the community."

A list of seventeen significant recommendations follows. These recommendations should be helpful to administrators and to parent-teacher workers, and, if acted upon, should do much to make the parent-teacher association function more effectively.

AMALIE K. NELSON

SMITH, MAX. *The Relationship between Item Validity and Test Validity.* New York: Teachers College, Columbia University, 1934. vii + 40 pp. (Teachers College, Columbia University, Contributions to Education, No. 621.)

In the investigation reported in this volume, a 200-item vocabulary test was administered to 370 subjects. The biserial *r* correlation was computed for each item with the total score. On the basis of the size of the biserial *r*'s, four subtests were assembled. The conclusion is reached that "the use of item validity coefficients alone increases validity very little (at any rate with items already well chosen)."

In many types of tests the total score is an unsatisfactory criterion of validity. Whenever the total score is so employed, consciously or unconsciously, it is assumed that we want to measure that function only which predominates in the test. This doubtful assumption, together with the slight contribution to validity reported in this study, makes difficult the justification of statistical validation of tests whenever the total score is employed as the criterion.

JAMES WERT

HUNTER, GEORGE W. *Science Teaching at Junior and Senior High School Levels.* New York: American Book Company, 1934. viii+552 pp.

The author of this practical book for science teachers, formerly head of the department of biology in Dewitt Clinton High School, New York City, and at present lecturer in methods of education in science at Claremont College, California, has attempted here to synthesize the findings of research in education and science teaching with classroom experience in science teaching. The author stresses the need for placing more emphasis upon attitudes and values and upon learning how to use and apply the scientific method—upon teaching for thinking as an outcome rather than upon the mere acquisition and reproduction of facts.

Recent studies and reports on practically all phases relating to science teaching are summarized and critically evaluated. Chapters, on method and techniques, the use of the textbook, motivation, visual aids, supervised study, meeting individual differences, and testing, present up-to-date findings and practical suggestions for experienced as well as beginning teachers. A timely chapter on health education in the science program, with examples of health programs, stresses the neglected need for co-ordination. An excellent, though necessarily incomplete, bibliography of reference books in various science fields (35 pages), arranged in a teacher's list and a pupil's list, and grouped by topics, should prove valuable to teachers on the job.

The chapter on testing includes lists of tests in the various science areas,

with very brief annotations. Each chapter is preceded by a "preview," and followed by study questions and reading references. It should be a valuable book for teacher-training classes in science teaching, as well as an excellent handbook for science teachers.

G. P. CAHOON

TYSON, LEVERING, ed. *Radio and Education, 1934*. Proceedings of the Fourth Annual Assembly of the National Advisory Council on Radio in Education, Inc. Chicago: University of Chicago Press, 1935. viii+266 pp.

In many ways this is the best of the four yearbooks which this important group has published. With the exception of the committee reports, the papers deal almost entirely with broad policies of the control and use of radio which affect its educational value. The list of speakers whose addresses are reproduced in the Proceedings is an impressive one. Politics, the press, the arts, and education are represented. The picture which is painted of the progress of radio is a hopeful one, on the whole, but its weaknesses and failings are not overlooked.

Those interested in the social significance of radio, in its control, and in its future will find the book well worth reading. It is excellent background material for giving an understanding of the total situation. For the person looking for solutions to detailed problems in the radio field this book has little to offer.

I. KEITH TYLER

Collecting Evidences of Children's Preferences

[*Continued from page 178*]

dence concerning relationship between conclusions drawn from evidence obtained by a paired-comparison paper-and-pencil technique and those drawn from evidence obtained by observational methods. Four case studies have been presented. This is limited evidence, but it may indicate results which may be found in more extensive studies. Both the observational method and the paired-comparison method have their advantages and disadvantages. Perhaps a more useful picture of the child's interest involves both. In so far as the evidence presented in this discussion is typical of what may be found in more extensive studies, there seems to be a fair degree of relationship between the two methods.

NEW TESTS

THE 1935 edition of the Iowa Every-Pupil Tests of Basic Skills in Reading, Study and Language has exercises for getting evidence of several study skills not usually found in published tests. The battery consists of three parts. In the first part on silent-reading comprehension, the students are expected to select the main ideas in each paragraph and to exhibit their ability at organizing ideas by choosing statements about a common topic. The second section is designed to test an understanding of significant details.

Part two consists of six subtests. The first is a general vocabulary test. The second is one on map reading and includes many exercises by which students may express their understanding of maps. Three kinds of graphs and charts are represented in the third section. The fourth section is a test on alphabetization. The test on use of an index contains a partial index in the first column and a list of questions asking for information in the second column. The students are expected to choose from the index the number of the page on which information about each question can be found. In the sixth section on use of basic references the students are given an opportunity to show their knowledge of what kind of information can be found in five basic references by indicating the reference in which one can locate information asked for in the exercises. Few tests on the market measure these skills as well as this test does.

Part three consists of four sections of basic language skills: a dictation and proof-reading spelling test comprises the first section; the usual capitalization test which includes a variety of situations in which good usage dictates that capital letters should be used forms the second section; in the punctuation test the students are given opportunities of correcting the punctuation in statements and letters; and in the language-usage section each sentence contains an underscored word which is to be corrected if the student thinks it necessary.

This battery of tests is also different from the usual group of tests in this area since it provides a fairly large number of situations for each objective. This should increase the reliability of each section and yield a more stable score for individual

students. The tests have been prepared by J. Lloyd Rogers in collaboration with members of the faculties of the College of Education and the University Experiment Schools at the State University of Iowa. They are part of the Iowa Every-Pupil Testing Program under the direction of E. F. Lindquist.

A NEW series of achievement tests for grades one to nine has been published by the Southern California School Book Depository in three batteries, primary, elementary, and intermediate. These tests, called the Progressive Achievement Tests, were constructed by Ernest W. Tiegs and Willis W. Clark. Each battery consists of tests of skills of reading, mathematics, and language usage. Although these tests are similar to many batteries of achievement tests for the elementary and junior high school, they are different in that they are designed to get evidence of achievement in some objectives of teaching which are not covered in the usual achievement-test batteries. For example, there are some exercises on how to use a table of contents and an index. Other exercises are designed to test knowledge of mathematical signs and symbols. The handwriting of the children on the spelling-diction test is taken as evidence of handwriting and marked by a handwriting scale.

Although the test booklets indicate that they are "diagnostic tests keyed to the curriculum," apparently they are not diagnostic for some of the specified objectives. This statement probably means, for example, that in a group of fourth- to sixth-grade children one can pick out rather accurately the children who are good on the whole language test but one could not do so with reference to the subject—recognizing incomplete sentences. The reliability coefficients for the major tests of the batteries range from .86 to .98. For each battery as a whole the reliability is .97.

Each of the specific objectives and the numbers of the exercises are listed on the front page of each booklet. This is convenient for recording the results of an item analysis for each child and filing with his permanent record. The norm profile chart on the front page is likewise useful in this respect.

Each battery is published in two forms. Grade placement and agenorms for the major objectives are provided in the Manual of Directions.

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